

California Department of Public Health

**Annual Operator Certification Report
to the
United States
Environmental Protection Agency**

State Fiscal Year 2010-2011

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California Operator Certification Program – Annual Report (July 1, 2010 – June 30, 2011)

Baseline Standards

1. Authorization

Authorization for the California Department of Public Health (CDPH) Operator Certification program was established via a certification by the State Attorney General filed with the operator certification program submittal in 2001. The CDPH operator certification regulations were developed to meet federal guidelines and requirements as well as California Health and Safety (H&S) Code Sections 106875 et. seq. Prior to 2001, California had a program to certify water treatment operators for Public Water Systems (PWS). That program did not include certification of distribution system operators. In 2001 the certification program was broadened to include certification of operators of public water system distribution systems. In addition, the regulations contain provisions to ensure that all treatment facilities and distribution systems are classified consistent with federal guidance. The 2001 operator certification regulations were incorporated into Title 22 of the California Code of Regulations (CCR) to maintain consistency with other drinking water regulations.

2. Classification of Systems, Facilities, and Operators (CCR T22, Section 64413)

CDPH uses a five level classification system for distribution systems (D1 – D5), treatment facilities (T1 – T5), and operators.

There are approximately 7,800 PWS in California classified according to the following table.

| Type of System | Approximate # Systems |
|----------------------------|-----------------------|
| Community | 3,130 |
| Non-Transient Noncommunity | 1,510 |
| Transient Noncommunity | 3,160 |
| Total | 7,800 |

CCR Section 64413.1 requires that all water treatment facilities be classified based on source water characteristics, maximum capacity, and treatment techniques utilized. Section 64413.3 requires that the distribution system for each community and non-transient, non-community water system be classified based on the size of population served and the complexity of the system.

The Drinking Water Field Operations Branch (FOB) Districts of CDPH have classified the water distribution systems and treatment facilities based on the criteria in Section 64413 and the specifics of each water system. Each PWS has designated the chief and shift operators and reported the information to the appropriate FOB District.

CDPH's estimate of overall compliance with operator certification requirements, based on experience with other regulations is as follows:

- Over 95 percent of the larger community PWS consistently comply with all aspects of the operator certification regulations. Larger community PWS are considered to be those with 1,000 service connections or more.
- Over 90 percent of the smaller community PWS consistently comply with all aspects of the regulations. Smaller community PWS are considered to be those with less than 1,000 service connections.

Assistance to small systems for operator training and certification is provided through funding from the U.S. Environmental Protection Agency (EPA) Expense Reimbursement Grant (ERG) and training through CalTap (California Technical Assistance Providers). CalTAP is a stakeholders group for technical assistance to drinking water systems. The group includes CDPH personnel, trainers including California Rural Water Association (CRWA) and Rural Community Assistance Corporation (RCAC), University of California at Davis, Sacramento State University, the California-Nevada section of American Waterworks Association (AWWA), and EPA.

3. Operator Qualifications

There are currently 18,731 certified water distribution operators and 12,756 certified water treatment operators in California.

The operator certification requirements for water treatment operators are listed in CCR Section 63800 and the requirements for distribution operators are listed in CCR Section 63805. In order to become certified, operators must pass an exam based on the knowledge, skill, and abilities set forth in regulation. The required knowledge, skills and abilities of each certification level were developed based on job analyses conducted by Subject Matter Experts in the field.

Through the application review process, CDPH verifies that education requirements are met prior to admittance to an exam. Once an applicant has passed the exam, CDPH verifies that experience requirements have been met, if applicable. Prior experience as an operator is required to receive certification as a Grade 3, 4 or 5 operator pursuant to CCR Sections 63800 and 63805.

CDPH has an ongoing 'validation' process to ensure that exam questions are representative of operator duties and responsibilities. CDPH sponsors workshops to validate exam questions and to write new questions. These workshops are attended by 'Subject Matter Experts' who are typically water system operators and managers with extensive experience in the field. This process helps to increase the number of items in the exam database and validates current questions by using the Angoff method of validation. Two workshops were held this year in Los Angeles and Fresno. Over 100 new exam questions were proposed and 200 current questions were reviewed and validated by the subject matter experts. This process will continue each year so that over a period of approximately five years, each exam question is validated.

4. Enforcement

The Operator Certification Unit has taken action to revoke the certificates of operators who have failed to meet requirements and consequently endangered public health. Such actions are taken pursuant to H&S Code Section 106876 which includes the following provisions:

CDPH may suspend, revoke, or refuse to grant or renew any water treatment or distribution operator certificate to operate or supervise the operation of a water treatment plant or may place on probation or reprimand the certificate holder upon any reasonable grounds, including, but not limited to, any of the following:

- (1) The submission of false or misleading information on an application for a certificate or engaging in dishonest conduct during an examination.
- (2) The use of fraud or deception in the course of operating or supervising the operation of a water treatment plant or water recycling treatment plant.
- (3) The failure to use reasonable care or judgment in the operation or supervision of the operation of a water treatment plant or water recycling treatment plant.
- (4) The inability to perform operating duties properly in a water treatment plant or a water recycling treatment plant.
- (5) The failure to meet all requirements for certificate renewal.
- (6) The conduct of willful or negligent acts that cause or allow the violation of the Safe Drinking Water Act.

The Field Operations Branch of CDPH can take enforcement action against a system if it is determined that the system does not meet operator certification requirements. These enforcement actions typically are a result of a finding that a water system does not have a chief operator certified at the required level or is utilizing non-certified operators to perform water treatment duties specified in CCR Section 63770(b).

For systems that are found in violation of operator certification requirements, the FOB District offices or county Local Primacy Agency takes enforcement actions appropriate to the specifics of the situation considering such factors as:

- Potential threat to public health;
- Type and complexity of water treatment processes;
- Water quality issues that could result from operator error;
- Interim action that is proposed by the water system to address the problem.

The enforcement actions taken typically consist of the issuance of a citation, compliance order or corrective action letter. In most cases the action includes a requirement for the water system to submit a plan for bringing the water system into compliance with the operator certification requirements.

5. Certification Renewal

Operators are required to renew certificates every three years. To be eligible for renewal, certified operators must complete a certain number of continuing education contact hours after the previous renewal or issuance of a certificate. The number of required training hours increase with the level of certification and are listed in table 63840-A.

**Table 63840-A.
Required Continuing Education Contact Hours for Certificate Renewal**

| <i>Water Treatment Operators</i> | <i>Contact Hours Required</i> |
|----------------------------------|-------------------------------|
| Grade T1 | 12 |
| Grade T2 | 16 |
| Grade T3 | 24 |
| Grade T4 | 36 |
| Grade T5 | 36 |
| <i>Distribution Operators</i> | |
| Grade D1 | 12 |
| Grade D2 | 16 |
| Grade D3 | 24 |
| Grade D4 | 36 |
| Grade D5 | 36 |

In order to ensure compliance with renewal requirements, CDPH reviews continuing education courses for subject matter content and verifies the course was taken within the renewal period. CDPH's website has a list of continuing education providers who offer acceptable courses throughout the state as well as on-line courses for operators in remote areas.

6. Resources Needed to Implement the Program

The Operator Certification Unit currently consists of eight staff members administering a program for approximately 31,000 certified operators. The unit utilizes two databases. The program is fully funded from revenues generated through exam, certification, and renewal fees. Each year the unit, with the assistance of a contractor, administers four exams to approximately 8,500 examinees, processes up to 10,000 renewals, and certifies 1,000 new operators. The exams are proctored under contract by a company that specializes in this service. The exams are given at multiple sites throughout the state.

7. Recertification

CCR Section 63845(c) states that a certificate that has been revoked for more than one year shall not be renewed. Operators whose certificate has been expired for more than one year must re-apply for the exam and meet all the exam and certification requirements in order to be recertified. CDPH reviews the applicant's education and experience to ensure all exam and certification requirements are met. Experience gained by the operator under a previous certificate can count toward the experience requirements for the current certificate application.

8. Stakeholder Involvement

CDPH sponsors and participates in an operator certification stakeholders' group. The group meets twice each year to discuss implementation of the operator certification regulations. Membership includes EPA, California-Nevada Section of AWWA, Local Union 39, CRWA, RCAC, water distribution and treatment instructors, and operators from large and small water systems. The group advises CDPH on issues such as continuing education contact hours, specialized training courses, operator experience, and other issues that arise.

9. Program Review

The stakeholders group has provided comments and suggestions on the CDPH certification program and has proposed changes to the regulations. The committee suggested that CDPH improve definitions of 'operator experience' and 'specialized training courses'. Stakeholders have also suggested that CDPH amend the requirements for the recertification of an operator whose certificate has expired. Currently an operator who previously held a Grade 4 or 5 certificate is not eligible to re-take the same level of exam without first passing the lower level grades. The consensus of the stakeholder group is that there should be provisions to allow for recertification for lapsed certificates in some cases. The revisions to the Operator Certification regulations are expected to take several years to adopt.

